

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Dongping Tao et al.

Serial No. 10/552,087

Filed: October 4, 2005

For: **ELECTROSTATIC PARTICLE CHARGER, ELECTROSTATIC SEPARATION SYSTEM, AND RELATED METHODS**

Confirmation No.: 4135

Group Art Unit: 1795

Examiner: Tai, Xiuyu

DECLARATION UNDER 37 CFR § 1.131

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

I, Dongping Tao, do hereby declare and say:

1. That I am named as an inventor in the above-identified patent application.

2. That I am familiar with the prosecution of this application, and understand that claims 1-11 and 22-30 are pending, and that claims 1, 2, 4, 5, 7, 9, and 11 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,797,908 to Yan et al. (hereinafter “Yan”), claims 3, 6 and 8 were rejected under 35 U.S.C. § 103(a) as being obvious over Yan, and claim 10 was rejected under 35 U.S.C. § 103(a) as being obvious over Yan in view of U.S. Patent No. 5,591,253 to Altman et al. (hereinafter “Altman”).

3. That Yan was filed on April 10, 2002, published October 16, 2003 after the earliest

priority date claimed by the present application, and issued September 28, 2004.

4. That prior to April 10, 2002, the effective filing date of Yan, the invention claimed in at least independent claim 1 of the pending application was completed by me in the United States. Specifically, the invention completed is an apparatus for intended use in charging particles in a system for separating particles from a fluid flow, comprising: a) a chamber including an inlet for receiving the particles and an outlet for discharging the particles; and b) a rotor rotatably mounted in the chamber, the rotor having a generally non-permeable outer surface for contacting and assisting in charging the particles.

5. That conception of the invention claimed in at least independent claim 1 of this application is illustrated in Exhibit A, which existed prior to April 10, 2002. Specific reference is made to the elements labeled "2. Charge roller" and "3. Separator." An actual reduction to practice is demonstrated by the photograph attached as Exhibit B, which shows a prototype separation system including the invention of claim 1 as it existed prior to April 10, 2002.

6. That the invention claimed in at least independent claim 1 of this application was conceived and reduced to practice with my involvement as an inventor thereof prior to the effective date of Yan.

7. The undersigned further declares that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false

statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing therefrom.

2/2/09
Date


Dongping Tao

Exhibit A

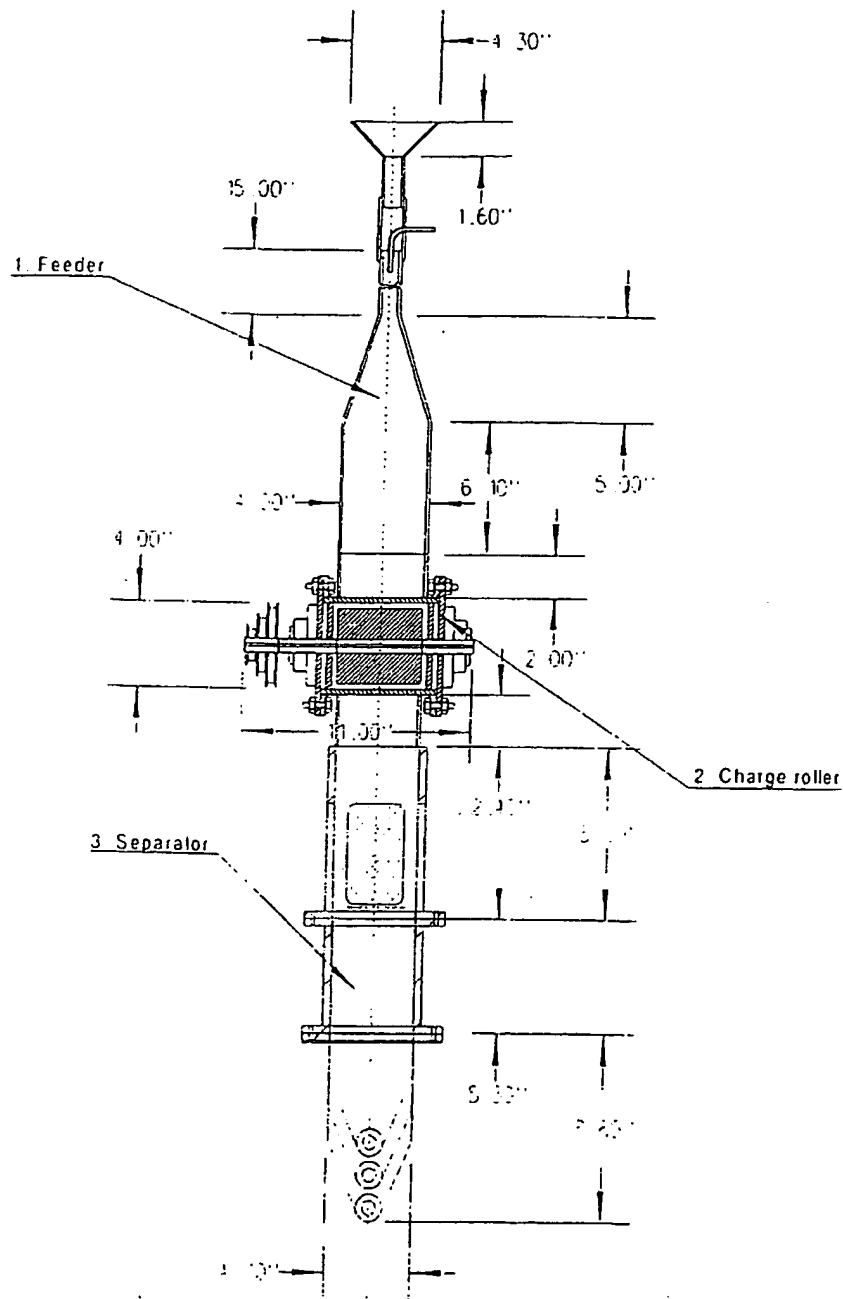


Figure 15. The newly designed triboroller electrostatic separator

1. Fundamentals

The electrostatic forces of a charged particle is the determined by:

$$F = Eq, \quad (9)$$

where F is the force on the charged particles, E is the electric field intensity at the particles, and the q is the point charge of the particles. Equation (9) indicates the

Exhibit B

